# PATENT COOPERATION TREATY

# PCT



## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

| Applicant's or agent's file reference | FOR FURTHER ACTION | See Form PCT/IPEA/416 |
|---|---|---|
| PA030013 | | |
| International application No. | International filing date *(day/month/year)* | Priority date *(day/month/year)* |
| PCT/EP2004/002429 | 10.03.2004 | 17.04.2003 |

International Patent Classification (IPC) or national classification and IPC
H04L1/08, G08B21/10, G08B27/00

Applicant
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1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
   a. ☒ *sent to the applicant and to the International Bureau)* a total of 2 sheets, as follows:
      ☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

| | | |
|---|---|---|
| ☒ | Box No. I | Basis of the opinion |
| ☐ | Box No. II | Priority |
| ☐ | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| ☐ | Box No. IV | Lack of unity of invention |
| ☒ | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| ☐ | Box No. VI | Certain documents cited |
| ☐ | Box No. VII | Certain defects in the international application |
| ☐ | Box No. VIII | Certain observations on the international application |

| Date of submission of the demand | Date of completion of this report |
|---|---|
| 13.11.2004 | 03.06.2005 |

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# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/EP2004/002429

## Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

   ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
   - ☐ international search (under Rules 12.3 and 23.1(b))
   - ☐ publication of the international application (under Rule 12.4)
   - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

| | |
|---|---|
| **Description, Pages** | |
| 1-15 | as originally filed |
| **Claims, Numbers** | |
| 1-10 | received on 13.11.2004 |
| **Drawings, Sheets** | |
| 1/3-3/3 | as originally filed |

   ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:
   - ☐ the description, pages
   - ☐ the claims, Nos.
   - ☐ the drawings, sheets/figs
   - ☐ the sequence listing *(specify)*:
   - ☐ any table(s) related to sequence listing *(specify)*:

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
   - ☐ the description, pages
   - ☐ the claims, Nos.
   - ☐ the drawings, sheets/figs
   - ☐ the sequence listing *(specify)*:
   - ☐ any table(s) related to sequence listing *(specify)*:

* *If item 4 applies, some or all of these sheets may be marked "superseded."*

**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

| | | | |
|---|---|---|---|
| Novelty (N) | Yes: | Claims | 2,3,6-8 |
| | No: | Claims | 1,4,5,9,10 |
| Inventive step (IS) | Yes: | Claims | |
| | No: | Claims | 1-10 |
| Industrial applicability (IA) | Yes: | Claims | 1-10 |
| | No: | Claims | |

2. Citations and explanations (Rule 70.7):

**see separate sheet**

**Re Item V.**

1. The following documents are referred to in this communication:

   D1: DATABASE NATIONAL WEATHER SERVICE [Online] 13 July 1999 (1999-07-13), "NWR Specific Area Message Encoding (SAME) 4.43" XP002292053 retrieved from HTTP://WWW.NWS.NOAA.GOV/NWR/NWRSAME.HTM

   D2: US-B-6 323 7671 (GROPPER DANIEL R) 27 November 2001 (2001-11-27)

2. The present claims are written in a way that contravenes Article 6 PCT:

2.1 The independent claim 1 lacks features that are considered essential for a clear definition of the invention, namely the restriction of the method to the NWR-SAME environment.

2.2 The claims contain a number of indefinite and vague expressions without a clear meaning for the skilled person:
-"non-data elements", "significant part", "insignificant part", "consistency checking" in claim 1,
-"meaningful data" in claim 6.

3. The two clarity objections above are tightly linked, because the unclear terms can not be understood unless they are restricted to the NRW environment. For instance, it seems from the description that the "non-data elements" refer to the warning tone and voice message parts of the general message. However, the expression alone is obscure, because it is not clear how a message can contain non-data elements.

3.1 This unclarity leads also to a lack of novelty (Art. 33(2) PCT) of the independent claim based on D1: the NWR SAME message contains: a preamble, a header code, warning tone, voice message, preamble and End of Message. The header code is transmitted three times and is the only part checked, by comparison of the three received versions. Then, in the terms of claim 1, the header code is the "significant"

part of the data string which is meant to be located and checked. The rest of the message is therefore the "insignificant part" which is disregarded for check purposes. The preamble, which is a digital part of the message carrying no information could be interpreted here as the "insignificant" "non-data element", as it is clear that majority voting is not applied thereto. According to this, the subject matter of claim 1 is not new.

3.2 A similar reasoning can be established to require further characterization of the expression "consistency checking": it could be understood as a mere string matching -as described by D2 (see column 7, last paragraph)- performed over one of the three NRW messages. From the description of the present file, it is clear that the "consistency checking" is a comparison of three consecutively received strings.

4. If understood in the light of the description, claim 1 appears to protect a method for decoding NRW messages by checking the agreement of only a subset of the repeated header codes. The subset comprises those codes which are considered as the most significant (see page 8, first paragraph) in terms of weather events. Following this interpretation, claim 1 seems to contain patentable subject matter under the requirements of Art. 33 PCT.
Compared to D1 and D2 , the proposed method goes one step beyond the recommended procedures based on 3 or 2 -respectively- identical (whole) messages found. The present invention focuses on the most important information and makes the alert system more robust against burst errors.

**Claims**

1) Method to decode a received data string, said data string being part of a message containing non-data elements and data string elements of varying length, comprising the steps of
   - locating a predefined significant part of the data string,
   - disregarding for consistency checking an insignificant part of the data string, and
   - further performing consistency checking only for the located significant part of the data string.

2) Method according to claim 1, comprising the steps of
   - determining the length of said string
   - pinpointing predetermined data positions using said length
   - removing data from said string starting from a position determined by said length.

3) Method according to claim 2, wherein the determining step consists in locating a predetermined sequence in said string.

4) Method according to one of the preceding claims, further comprising the steps of
   - comparing, byte by byte, different strings assumed to contain identical data
   - taking as correct data those bytes for which said comparison gives the result "identical".

5) Method according to one of the preceding claims, further comprising the steps of

- locating a predefined important segment as significant part of the data strings remaining after the previous step,
- disregarding the data locations that do not belong to said important segment, and
- further checking only the important segments.

6) Method according to anyone of the preceding claims comprising the further step of
- searching for meaningful data in case that no correct data can be determined.

7) Method according to anyone of the preceding claims comprising the further step of
- searching for a predefined header code block, and
- attaching a header code block at the start of the received data string if no such header code block is found in the preceding step.

8) Method according to anyone of the preceding claims comprising the further step of
- checking for a predetermined set of symbols at a predetermined location of the data string, and
- inserting to or removing from the data string symbols so as to shift the predetermined set of symbols to its predetermined location if the check of the previous step did locate them at a different position.

9) Device for performing a method according to one of claims 1 to 8.

10) Broadcast receiver being equipped with a device according to claim 9 or being provided for performing the method according to one of claims 1 to 8.